B1 itself. The scattered light is effective to photoactivate a photoatherolytic compund contained in the target region. Irradiation is typically carried out for 10-20 minutes.

Please amend page 3, third paragraph, of the specification to read as follows:

Also included in the apparatus are (i) a fiber-optic having a light-diffusing tip, the bundle being adapted to be introduced through the catheter lumen, with the catheter's distal-end sleeve placed within the target site, (ii) a proximal-end catheter port through which a B2 light-transmissive fluid can be injected thought the catheter into the catheter's distal-end sleeve, and (iii) a proximal-end optical connector through which the fiber-optic bundle can be connected to a light source, such as a laser, for irradiating the atherosclerotic vessel region by passing, for example, a laser light beam, through the fiber-optic bundle. In operation, a light beam, again for example, a laser light beam, is distributed along the catheter's distal-end sleeve, for transmission through the sleeve, by light scattering produced by (i) the light-diffusing tip, (ii) the light-transmissive fluid injected into the catheter's distal-end sleeve and/or (iii) the distal sleeve itself.

Please amend page 5, first paragraph, of the specification to read as follows:

Figs. 1 and 2 show a distal-end portion of the apparatus, indicated at 12, showing the B3 distal-end portion of a catheter jacket 14, a distal-end diffuser 16, and a juncture 18 between the two. The distal-end diffuser may be transparent or translucent, providing either a transparent light sleeve or a light-scattering sleeve. This distal section of the catheter is made from an optically transparent, heat stable, flexible material, such as a crosslinked polymer, for example polyethylene or polytetrafluroroethylene (PTFE). The flexibility allows the catheter to track easily over the wire, the transparentcy allows light to escape through the wall, and heat stability prevents heat deformation from the light energy. Light scattering particles may be added to the sleeve material.

Please amend page 6, second paragraph, of the specification to read as follows:

Sub C2 Figs. 3A-3D show the positioning of a distal end portion of the apparatus within a chamber of a heart 26, for accessing a vascular target region of the heart in need of B4 phototherapy. Initially, although not shown, the patient is administered a photosensitizing compound, typically by systemic administration, and the compound is allowed to accumulate at the target site, according to known phototherapy principles. Exemplary photosensitizing compounds are those used in phototherapy, such as a phycocyanin, a phthalocynanine, pheophorbide derivative PH-1126, mono-L-aspartyl chlorin e6 (NPe6), hematoporhyrin derivative (HpD), benzoporphyrin derivative (BPD), Photofrin and Photofrin 2, protoporphyrin IX, and dihematoporphyrin-ester and -ether (DHE).